

WHAT IS CLAIMED IS:

1. A method of operating a digital micromirror device having at least one micromirror, the method comprising:

applying a reset voltage pulse to the micromirror, wherein the reset voltage pulse causes the micromirror to launch from a landing plate;

applying an offset voltage to the micromirror immediately after the reset voltage pulse, wherein the offset voltage is applied for a damping delay period, wherein the micromirror launches and is moving away from the landing plate before an expiration of the damping delay period;

applying a damping pulse to the micromirror immediately after the offset voltage; and
reapplying the offset voltage to the micromirror, whereby the damping pulse reduces oscillation of the micromirror about a neutral position.

2. The method of claim 1, wherein the damping pulse has the same polarity as the reset voltage pulse.

3. The method of claim 1, wherein the damping pulse has the same polarity and magnitude as the reset voltage pulse.

4. The method of claim 1, further comprising:

loading an address state for the micromirror during the reapplying of the offset voltage;
and

applying a bias voltage to the micromirror, wherein the micromirror assumes the address state.

5. The method of claim 1, wherein the reset voltage is about -26 volts and the offset voltage is about 7 volts.
6. The method of claim 5, wherein the damping pulse voltage is about -26 volts.
7. The method of claim 1, wherein the damping delay period is greater than 1 microsecond.
8. The method of claim 7, wherein the damping delay period is about 1.6 microseconds and the damping pulse is about 3.9 microseconds long.

9. A method of operating a digital micromirror device having at least one micromirror, the method comprising:

applying a reset voltage pulse to the micromirror, wherein the reset voltage pulse causes the micromirror to launch from a landing plate;

applying an offset voltage to the micromirror immediately after the reset voltage pulse, wherein the offset voltage is applied for a damping delay period, wherein the micromirror launches and is moving away from the landing plate before an expiration of the damping delay period;

applying a damping pulse to the micromirror immediately after the offset voltage, wherein the damping pulse voltage is the same as the reset voltage; and

reapplying the offset voltage to the micromirror, whereby the damping pulse reduces oscillation of the micromirror about a neutral position.

10. The method of claim 9, further comprising:

loading an address state for the micromirror during the reapplying of the offset voltage; and

applying a bias voltage to the micromirror, wherein the micromirror assumes the address state.

11. The method of claim 9, wherein the reset voltage is about -26 volts and the offset voltage is about 7 volts.

12. The method of claim 9, wherein the damping delay period is greater than 1 microsecond.

13. The method of claim 12, wherein the damping delay period is about 1.6 microseconds and the damping pulse is about 3.9 microseconds long.